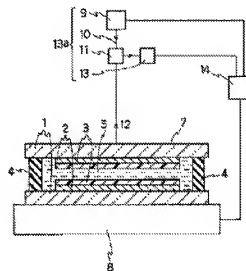


**NONDESTRUCTIVE ANALYSIS OF IONIC IMPURITIES IN LIQUID CRYSTAL**

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- **European:**  
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**PURPOSE:** To analyze ionic impurities in a liquid crystal confined in a liquid crystal cell with high spatial resolution without breaking the cell by employing a liquid crystal cell containing a liquid crystal mixed with a fluorescence indicator exhibiting high selectivity for the ionic impurities and measuring the intensity of fluorescence at the liquid crystal part. **CONSTITUTION:** A transparent electrode 2 of tin doped indium oxide is formed on the surface of a transparent glass substrate 1 and an orientation film 3 of polyimide is formed thereon by rubbing. The substrates 1 are then superposed each other through a sealing material 4 and a liquid crystal mixed with a fluorescence indicator is injected to obtain a liquid crystal cell 7. The liquid crystal cell 7 is set on a stage 8 and a specific position thereof is irradiated with a light beam produced by taking out only an exciting light 10 of specific wavelength exhibiting high selectivity for the fluorescence indicator from an exciting light source 9 and condensing through an optical system 11. A faint fluorescence 12 emitted from the irradiated part is taken in through the optical system 11 and detected as a fluorescence spectrum through a high sensitivity detector 13.

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